West Virginia Department of Environmental Protection
Division of Air Quality

Fact Sheet

For Draft/Proposed Significant Modification Permitting Action Under 45CSR30 and Title V of the Clean Air Act

This Fact Sheet serves to address the changes specific to this Significant Modification, and shall be considered a supplement to the Fact Sheet corresponding with the Title V operating permit issued on January 4, 2006.

Permit Number: **R30-00900001-2006**
Application Received: **January 28, 2011**
Plant Identification Number: **03-54-009-00001**
Permittee: **Koppers Inc.**
Facility Name: **Follansbee Tar Plant**
Mailing Address: **P.O. Box 665, Follansbee, WV 26037**

Permit Action Number: *SM02* Revised: *Draft/Proposed*

Physical Location:	Follansbee, Brooke County, West Virginia
UTM Coordinates:	533.46 km Easting • 4465.02 km Northing • Zone 17
Directions:	Take Route 2 North about 19 miles from Wheeling to Follansbee. Travel through town and at sixth traffic light, turn left at Veteran's Drive. Follow road to plant site.

Facility Description

Koppers Inc., Follansbee Tar Plant has a Standard Industrial Classification (SIC) code of 2865 and a North American Industry Classification System (NAICS) code of 325192. The Follansbee Tar Plant is a tar refining and naphthalene production facility. The facility produces tar acids, pavement sealer bases, various grades of coal tar, petro tar, refined tars from crude coke oven tar (CCOT), distillate oils, solvent naphtha, and Refined Chemical Oil (RCO). Creosote solutions are produced by blending different coal tar distillates. Naphthalene is produced from the refined chemical oil (RCO). The plant consists of the following units: tar stills, debenzolizer

unit, acid washers, naphthalene distillation, pencil pitch unit, base plant, boiler house, tank car cleaning, storage tanks, loading racks, and wastewater treatment. The tar plant has the maximum capacity to produce 165,650 tons per year of Carbon Pitch as well as specialty pitches and refined tars. The Chemical Plant at the Tar Plant has the capability of recovering 98,156 tons of Naphthalene per year. The facility has the potential to operate twenty-four (24) hours a day for seven (7) days per week and fifty-two (52) weeks per year.

This significant modification involves the changes reflected in Permits R13-2274G and R13-2274H. R13-2274G is for the replacement of the existing #31 Tube Heater that has a design rated capacity of 27 MMBtu/hr with a new tube heater that has a design rated capacity of 29.01 MMBtu/hr and is capable of using dual fuel. The new tube heater will also be denoted as #31 Tube Heater. R13-2274G has a fuel usage restriction that allows the modification to be a synthetic minor under Prevention of Significant Deterioration (PSD) (45CSR14) and the non-attainment permitting rule (45CSR19).

Following is a summary of changes that were made in R13-2274H:

1. Corrected minor typos.

2. Corrections to Conditions 4.1.16 and 4.2.3.3 for the thermal oxidizer.

3. Revisions made to Conditions 5.1.8 and 5.3.1 for the #31 Tube Heater.

4. The design capacity of Tank 808 was revised from 238,000 to 65,000 gallons.

5. Loading racks, LR 4-4 and LR 5-6 were moved to loading pitch. The emissions from these loading racks will be controlled by Scrubber E.

Emissions Summary

Pollutants	Initial PTE (TPY)	Current PTE under SM01 (TPY)	Change in PTE under SM02 (TPY)	Proposed PTE (TPY)
CO	114.337	0	-3.57	110.767
NO_X	279.040	0	+27.67	306.71
$PM_{2.5}$		0	+7.28	7.28
PM_{10}	49.901	0	+7.28	57.181
TSP	55.088	0	+7.28	62.368
SO_2	116.293	0	+22.63	138.923
VOC	151.814	-123.040	+8.44	37.214
Pb	0.005	0	0	0.005
HAPs	58.400	-42.770	+0.02	15.65

Title V Program Applicability Basis

With the proposed changes associated with this modification, this facility maintains the potential to emit over 100 tons per year of Nitrogen Oxides (NO_X), Carbon Monoxide (CO), and Sulfur Dioxide (SO_2). Due to this facility's potential to emit over 100 tons per year of criteria pollutants, Koppers Inc. is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

The modification to this facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR2	To Prevent and Control Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchanger
	45CSR10	To Prevent and Control Air Pollution from the Emissions of Sulfur Dioxides
	45CSR13	Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation
	45CSR16	Standards of Performance for New Stationary Sources Pursuant to 40 C.F.R. Part 60
	45CSR30	Operating permit requirement.
	40 C.F.R. Part 60 Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
State Only:	None	

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the draft Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit *(if any)*
R13-2274H	July 11, 2012	Supersedes R13-2274G; Issued: August 26, 2011

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B," which may be downloaded from DAQ's website.

Determinations and Justifications

The Title V Significant Modification incorporates changes from R13-2274G, issued on August 26, 2011, and from R13-2274H, issued on July 11, 2012.

1. R13-2274G changes:

1.1. R13-2274G is for the removal of an existing #31 Tube Heater that has a design rated capacity of 27 MMBtu/hr and the construction of a new tube heater that has design rated capacity of 29.01 MMBtu/hr. The new tube heater will also be called #31 Tube Heater. The old tube heater only combusted natural gas, while the new tube heater has the ability to combust a combination of natural gas and non-conventional liquid fuel. Liquid fuel is a mixture of debenzolizer overheads and unwashed solvent (see Sections 4.1.6 and 7.1.6.). Debenzolizer overheads are the overheads from the distillation of Refined Chemical Oil (RCO). Unwashed solvent is the overhead cut from the solvent distillation column in the Naphthalene Unit (NDU). Liquid fuel is not clearly defined in 40 C.F.R. Part 60 Subpart Dc.

1.2. There would have been a significant increase of NO_X and $PM_{2.5}$ that would have triggered PSD and Non-Attainment NSR for NO_X and $PM_{2.5}$ if the new tube heater only combusted liquid fuel at full capacity. To avoid triggering PSD and Non-Attainment NSR, Koppers proposed limiting the consumption of natural gas and liquid fuel (see Section 7.1.2.c.).

1.3. The new tube heater will be subject to 40 C.F.R. Part 60 Subpart Dc since construction commenced after June 9, 1989. The new tube heater meets the definition of a steam generating unit and has a maximum design heat input capacity of 100 MMBtu/hr or less but greater than or equal to 10 MMBtu/hr [40 C.F.R. § 60.40c (a)]. Tube Heater #31 is subject to recordkeeping and reporting requirements of 40 C.F.R. Part 60 Subpart Dc. These requirements are 40 C.F.R. § 60.48c (g) (2) for recordkeeping and 40 C.F.R. § 60.48c (a) for reporting (see Sections 7.4.2 and 7.5.2, respectively).

2. R13-2274H changes:

2.1. Changes to allow loading pitch by railcar using loading rack LR 4-4 and loading pitch by truck using LR 5-6. Both Loading racks will be controlled by Scrubber E. This change will have no effect on plant-wide facility potential emissions since the total throughput for pitch loaded will remain the same.

2.2. Tank 808 was installed in 2012 with a design capacity of 65,000 gallons instead of being installed in 2008 with a proposed design capacity of 237,644 gallons. Tank 808 will be placed in various pitch service and emissions controlled by Scrubber E.

2.3. Former Condition 4.1.20 from R13-2274F for the thermal oxidizer (778) and flare (774a), the main stay for Koppers to be a synthetic minor was inadvertently left out of R13-2274G. Condition 4.1.16 of R13-2274G appeared to be a duplicate of Condition 4.1.15 with the exception of 4.1.16.1 which specified a combustion temperature that is not applicable to the units specified under 4.1.16. Since Koppers Follansbee Tar Plant is required to achieve a minimum destruction efficiency of 98% for VOCs and HAPs to become a synthetic minor source, monitoring requirements to demonstrate that the thermal oxidizer (778) and the main flare (774a) will be maintained and operated are necessary. Therefore Condition 4.1.16 was replaced with Thermal Oxidizer and flare requirements similar to former Condition 4.1.20 of R13-2274F.

2.4. Condition 4.2.3.3 was revised to exclude the temperature recorded for the thermal oxidizer when it is shut down from the daily 24-hour average temperature calculation.

2.5. The table in Condition 5.1.8.a of R13-2274G was revised to include Footnote #3, which is for the HAP emission factors to be based on Table 1.4-3 of the AP-42's Natural Gas Combustion. Also, the "Hourly (LB/MMBtu)" for HAPs emissions was revised from "0.001" to "0.002."

2.6. At Koppers suggestion, Condition 5.3.1 of R13-2274G was revised in R13-2274H. This is a new provision in the Title V permit as 7.3.1.

The following changes that were made to the Title V permit are a result of the revisions made under R13-2274G and R13-2274H:

1. Sections 1.1 and 1.2 of Section 1.0 for Emission Units and Active R13, R14, and R19 Permits were updated to the current equipment changes and current NSR permit number.

    1.1. Emission Unit Table for #31 Tube Heater

        1.1.1 The "Year Installed" was modified from a blank to 2011.

        1.1.2. The "Design Capacity" was revised from 27 MMBtu/hr to 29.01 MMBtu/hr.

    1.2. Changes to the Emission Unit Table for loading racks, LR 4-4 and LR 5-6, and Tank 808.

        1.2.1. Loading rack LR 4-4 "Emission Point ID" changed from "Vehicle" to "777." "Control Device" changed from "None" to "777 (Scrubber E)."

        1.2.2. Loading rack LR 5-6 "Emission Point ID" changed from "Vehicle" to "777." "Control Device" changed from "None" to "777 (Scrubber E)."

        1.2.3. Tank 808 "Design Capacity" changed from "237,944" to "65,074" gallons. "Control Device" changed from "None" to "777 (Scrubber E)."

        1.2.4. The addition of LR 4-4 and LR 5-6 to "Sources Controlled" for Scrubber E in the List of Control Devices Table.

    1.3. Active R13, R14, and R19 Permits

        1.3.1. The "Permit Number" was revised from R13-2274F to R13-2274H.

        1.3.2. The "Date of Issuance" was changed to July 11, 2012.

2. In Section 3.1.26, R13-2274G and R13-2274H were added to the list of permit applications.

3. The emissions limits in the Section 3.1.27 table are for sources that combust only natural gas. Since the old #31 Tube Heater was removed, the emission limits in the Section 3.1.27 table were revised for tube heaters #1, #2, and #4. The emissions limits for the new #31 Tube Heater are speciated in Section 7.1.2.a.

4. The boilerplate language for Section 3.3.1 was revised with the addition of Section 3.3.1.d and the citation was also revised to expand the authority of the West Virginia state code.

5. In Section 3.5.3, the US EPA Region 3's address was revised. This is a general change to the boiler plate language.

6. There are a number of changes to the section numbering in this permit since the NSR permit writer revised the condition numbering scheme in R13-2274G. The citations were revised according to these changes. These changes are:

    6.1. Section 3.1.28 citation.

    6.2. Section 3.2.1, removed 993 from the requirement and citation because the requirement for monthly visible emission observations of 993 is now included in Section 4.2.3. Although Stack 774b is in Condition 4.2.2 of R13-2274H, it was not added to the citation or incorporated in Section 3.2.1 of the Title V since the Flare (774b) is not in service.

Also, Flare (774b) was not in Section 3.2.1 of the previous Title V permit. The Follansbee Tar Plant's Responsible Official sent a letter stating that Flare 774b is out of service. To place Flare 774b into service, Koppers will need a NSR permit.

6.3. Section 3.4.1 added citation.

6.4. Sections 4.1.1 through 4.1.5, and 4.2.2 citations.

6.5. Section 5.1.8, 5.1.9, and 5.2.1 citations.

6.6. Sections 8.1.1 through 8.1.3 citations.

6.7. Sections 9.1.1, 9.1.2, and 9.1.4 through 9.1.6 citations.

6.8. Sections 10.1.1, 10.1.3, and 10.1.4 citations.

6.9. Section 11.1.1 citation.

6.10. Section 13.1.1 through Section 13.1.8 and Section 13.2.1 citations.

6.11. Section 14.1.1 through Section 14.1.2 and Section 14.1.5 citations.

6.12. Section 16.1.1 citation.

6.13. Section 17.1.1 citation.

6.14. Section 18.1.1 citation.

6.15. Sections 19.1.1, 19.1.3, 19.1.12, 19.1.13, 19.2.3, 19.4.1, and 19.4.2 citations.

6.16. Sections 21.1.2 through 21.1.9, 21.2.1, 21.2.2, 21.3.1, 21.4.1 through 21.4.4, and 21.5.1 through 21.5.6 citations.

7. Section 4.1.6 was revised in accordance with Condition 5.1.9 of the recent R13 permit.

8. Condition 5.2.3 of R13-2274H replaced Section 4.2.1.

9. Visible emission observations from Condition 5.2.2 of R13-2274H were added as a requirement for Boiler #3 in Section 4.2.3. Boiler #3 consumes liquid fuel, natural gas, or a combination of both. This is also a requirement for #31 Tube Heater (see Section 7.2.1.).

10. Section 4.4.7 was removed since recordkeeping is in Section 4.2.1.

11. Section 7.1.2 was revised to incorporate the installation, operation, maintenance, and emission limits of the new #31 Tube Heater since the new tube heater can combust natural gas, liquid fuel, or a combination of natural gas and liquid fuel while the previous tube heater combusted only natural gas (see Condition 5.1.8 of R13-2274H permit).

12. The permittee took limits on fuel to avoid triggering PSD and Non-Attainment NSR (45CSR14 and 45CSR19) for NO_X and $PM_{2.5}$ when combusting 100% liquid fuel or any combination of liquid fuel and natural gas in the new #31 Tube Heater. There are no restrictions for combusting natural gas. The new #31 Tube Heater is restricted to combusting only 1,395,515 gallons of liquid fuel per year. For the combination, the new #31 tube heater will be limited to consuming 1,311,840 gallons of liquid fuel per year and 74,410,000 cubic feet of natural gas per year. #31

Tube Heater's maximum fuel usage or consumption rates are incorporated in Sections 7.1.2.c.i and ii (see corresponding Conditions 5.1.8.c.i and ii of R13-2274H permit).

13. Section 7.1.5 was replaced with reserved since it is covered by streamlining in Section 7.1.2.

14. Section 7.1.6 was revised according to the current R13 permit's Condition 5.1.9.

15. In the third line of Section 7.1.7, the reference to Section 7.1.6 was revised to 7.1.5.

16. Section 7.2.1 was added according to the current R13 permit's Condition 5.2.2.

17. Condition 5.2.3 of the current R13 permit was added as Section 7.2.2.

18. Section 7.3.1 was inserted per Condition 5.3.1 of the current R13 permit.

19. Section 7.4.1.2 was revised according to Condition 4.4.5.2 of R13-2274H.

20. The replacement tube heater is subject to the recordkeeping requirements of 40 C.F.R. Part 60 Subpart Dc (see Section 7.4.2 and Condition 5.2.2 of the recent R13 permit).

21. Section 7.5.1 was replaced with the current R13 permit Condition 5.5.1.

22. The Follansbee Tar Plant will submit reports as outlined in Section 7.5.2 for the new tube heater since the new tube heater is subject to 40 C.F.R. Part 60 Subpart Dc.

23. Section 9.1.3 was revised to incorporate LR 4-4 and LR 5-6 in the list of loading racks controlled by Scrubber E.

24. Section 19.1.14 was removed since the "Piggy back" flare (774b) was removed from service on March 31, 2009 and the piping was also physically disconnected on that day. This is according to the letter from the Follansbee Tar Plant's Responsible Official (see Item 6.2). The "Piggy back" flare (774b) is still physically on site.

25. Section 19.2.1.c was revised to correspond to Condition 4.2.3.3 of R13-2274H.

26. The new #31 Tube Heater is not subject to Compliance Assurance Monitoring (CAM) since it is not a pollutant specific emissions unit (PSEU) that satisfied all of the applicability criteria requirements of 40 C.F.R § 64.2 (a).

27. Loading racks, LR 4-4 and LR 5-6, are not subject to Compliance Assurance Monitoring (CAM) since they are not pollutant specific emissions units (PSEU) that satisfied all of the applicability criteria requirements of 40 C.F.R § 64.2 (a).

28. Koppers Inc. has not made any modifications that would trigger a PSD permit for GHG emissions; therefore the Greenhouse Gas Tailoring Rule does not apply.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

40 C.F.R. Part 63 Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, or Institutional Boilers and Process Heaters. This MACT was vacated and remanded by the United States Court of Appeals for the District of Columbia Circuit on July 30, 2007. Since the Koppers Follansbee Tar plant is a synthetic minor source of HAPs (R13-2274E), the facility is not subject to 40 C.F.R. Part 63 Subpart DDDDD which applies to major sources.
40 C.F.R. Part 63 Subpart JJJJJJ	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources. #31 Tube Heater is a process heater with a waste heat boiler that is not subject to 40 C.F.R. Part 63 Subpart JJJJJJ since this emission standard only applies to boilers and not process heaters.
40 C.F.R. Part 64	The new #31 Tube Heater and loading racks, LR 4-4 and LR 5-6, were found not to be subject to Compliance Assurance Monitoring (CAM) since these sources are not pollutant specific emissions units (PSEU) that satisfied all of the applicability criteria requirements of 40 C.F.R § 64.2 (a).

Request for Variances or Alternatives

None

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date: November 30, 2012
Ending Date: January 2, 2013

All written comments should be addressed to the following individual and office:

Wayne Green
Title V Permit Writer
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Point of Contact

Wayne Green
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. 1258 • Fax: 304/926-0478

Response to Comments (Statement of Basis)

(**Choose**) Not applicable.
OR
Describe response to comments that are received and/or document any changes to the final permit from the draft/proposed permit.